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# Supplementary Information

# Biological activity of human mesenchymal stromal cells on polymeric electrospun scaffolds

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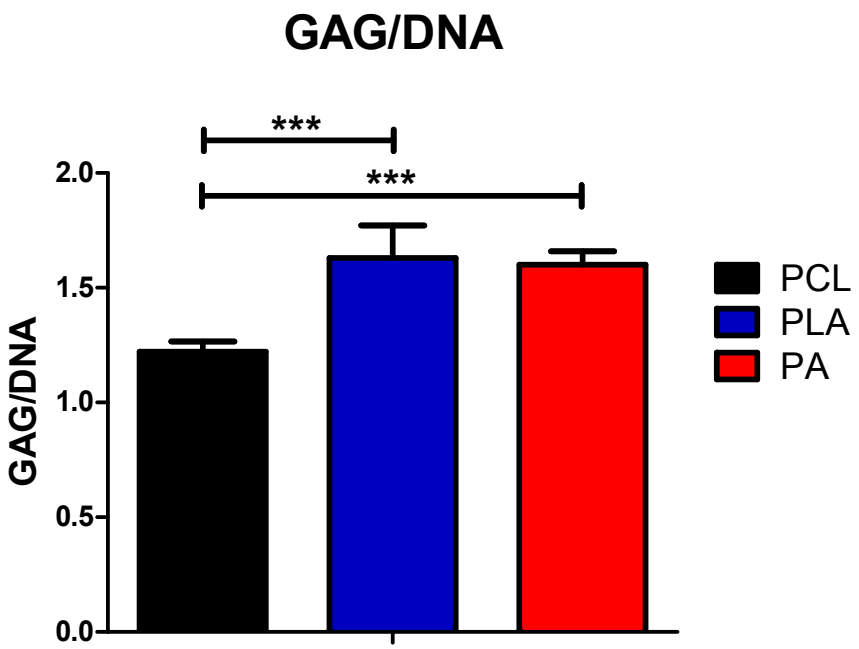
**Supplementary Table 1. List of parameters on different polymers**

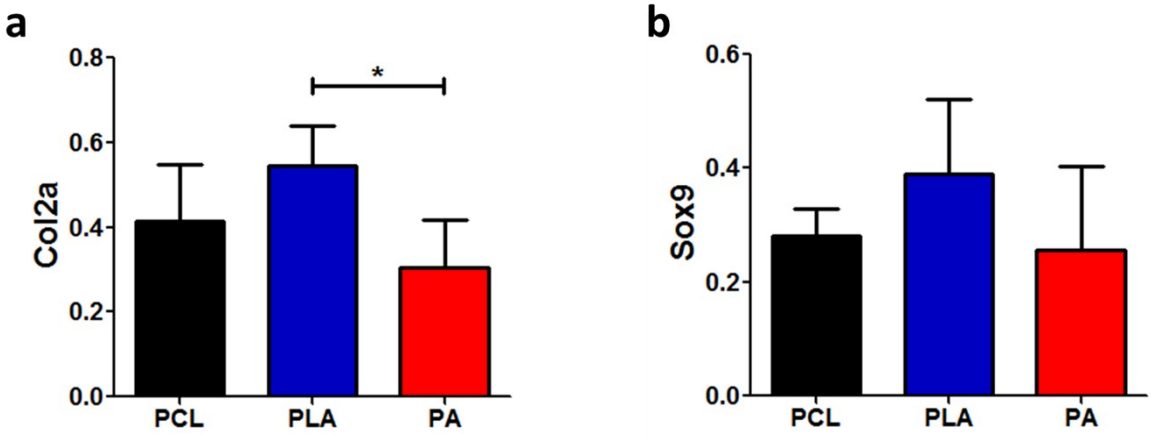
| Polymer | Concentration (%) | Flow rate (ml/h) | Working distance (cm) | Voltage (kV) |
|---|---|---|---|---|
| PCL | 10 - 20 | 1 - 12.5 | 20 - 25 | 15 – 25 |
| PLA | 10 – 15 | 0.5 - 10 | 15 - 20 | 12 – 15 |
| PA | 18 – 20 | 1 - 20 | 20 - 25 | 15 |

**Supplementary Table 2.** ***Primer sequences***

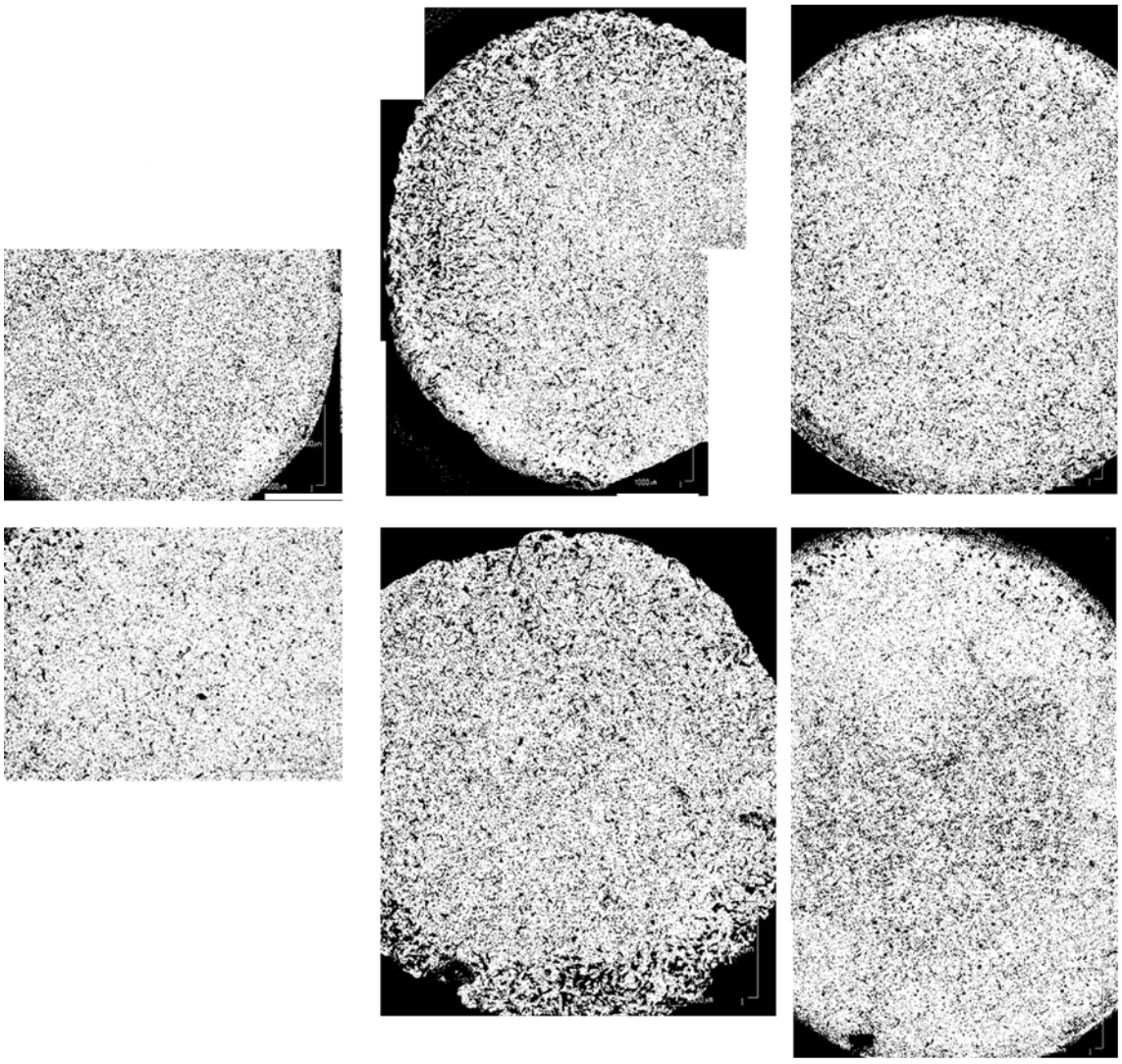
| Gene | Forward Primer | Reverse Primer |
|---|---|---|
| ALP | ACAAGCACTCCCACTTCATC | TTCAGCTCGTACTGCATGTC |
| Sox9 | TGGGCAAGCTCTGGAGACTTC | ATCCGGGTGGTCCTTCTTGTG |
| Col-1a | GAGGGCCAAGACGAAGACATC | CAGATCACGTCATCGCACAAC |
| Col-2a | CGTCCAGATGACCTTCCTACG | TGAGCAGGGCCTTCTTGAG |
| ALCAM | ACGATGAGGCAGACGAGATAAGT | CAGCAAGGAGGAGACCAACAA |
| BMP2 | ACTACCAGAAACGAGTGGGAA | GCATCTGTTCTCGGAAAACCT |
| OPN | GGTGATGTCCTCGTCTGTA | CCAAGTAAGTCCAACGAAAG |
| OCN | TGAGAGCCCTCACACTCCTC | CGCCTGGGTCTCTTCACTAC |
| Runx2 | GGAGTGGACGAGGCAAGAGTTT | AGCTTCTGTCTGTGCCTTCTGG |
| GAPDH | CGCTCTCTGCTCCTCCTGTT | CCATGGTGTCTGAGCGATGT |
| OCT4 | CTCACCCTGGGGGTTCTATT | CTCCAGGTTGCCTCTCACTC |
| CD63 | GCCCTTGGAATTGCTTTTGTCG | CATCACCTCGTAGCCACTTCTG |




**Supplementary Figure 1. Normalization of GAG over DNA content at day 14.** PLA and PA scaffolds showed statistically higher GAG/DNA content than PCL scaffolds. Data shown as mean ± s.d. (n=6). Stars (*P<0.05, ** P<0.01, *** P<0.001) indicate statistically significant values in comparison to each scaffold type to one another.




**Supplementary Figure 2.** Chondrogenic marker, Col2a and Sox9 showed downregulation in all electrospun scaffold type. Statistical analysis was done by One-way Analysis of Variance (ANOVA) with Bonferroni's multiple comparison test (p<0.05). Black stars (*P < 0.05, ** P < 0.01, *** P < 0.001) indicate statistically significant values in comparison to each scaffold type to one another



**Supplementary Figure 3.** Cell migration study on unloaded and loaded PA scaffolds. Inverted light microscope images of stained transwell inserts showing the migrating cell in a black and white contrast view. Scale bar: 1000 µm.